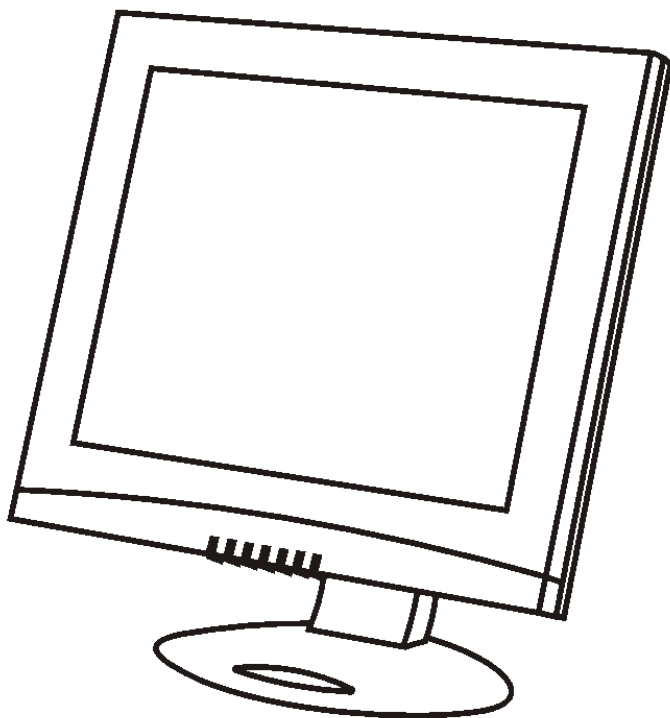




F-15

15" TFT LCD PANEL

User Manual



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Installation

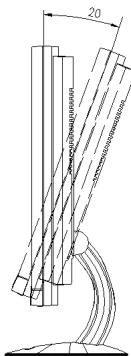
- Do not cover or block the ventilation ports on the rear of the monitor.
- Do not install the monitor close to heat sources such as radiators or air ducts, or in a location exposed to direct sunlight, excessive dust, mechanical vibration, or shock.

Power connection

- Use the correct power cord for your local voltage.
- Use an accessible outlet close to the monitor.
- Do not allow anything to rest on the power cable.
- Disconnect the power cable from the power supply if:
 - You will not use the monitor for an extended period.
 - The cable is damaged or frayed.
 - The monitor has been dropped or the cabinet damaged.
 - A distinct change in performance indicates a need for servicing.

Using the Tilt

- Use the monitor's tilt capability to adjust its vertical orientation to an appropriate position. Grasp the top corners of the monitor with both hands and tilt to the desired angle.



For use only with power supply Lien,LE-9702B and Chi Sam , CH-1024

Maintenance

- Clean the cabinet and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any abrasive materials or solvents such as alcohol or benzene.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as pens or screwdrivers, as the screen may scratch.
- Do not insert objects or spill liquids into the ventilation ports on the monitor's rear, as fire, electric shock, and/or unit failure may result.

Transporting the monitor

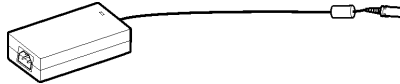
When transporting the monitor for repair or shipment, use the original carton and packing materials.

Getting Started

Package contents

Before beginning, ensure that the carton contains the following items:

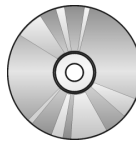
- Monitor
- Power adapter



- Power cord



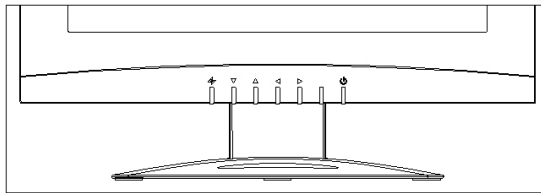
- Floppy/CD-ROM containing Windows® information file



- This manual

Identifying parts and controls

The center front panel of the monitor carries the control array.



FRONT VIEW

The controls are, from left to right:



AUTO button

Automatically adjusts the picture and performance. The AUTO function should be used the first time you use the monitor and after changing the resolution and/or refresh rate of the input signal. The AUTO button also closes the OSD.



DOWN button

Activates the OSD and navigates within the display



UP button

Activates the OSD and navigates within the display



LEFT button

Activates the OSD and navigates within the display



RIGHT button

Activates the OSD and navigates within the display

LED indicator

Indicates the monitor's operational mode; green for regular operation, and amber for power saving mode.



Power Switch

Turns the monitor on and off

Setup

Follow these directions to correctly set up your monitor.

1. Remove all packing materials and wrapping from the monitor
2. Place the monitor in its desired location. Ensure that there is space around the monitor, especially the rear area.
3. With the computer turned off, connect the VGA signal cable. The native monitor cable connects to the 15-pin compatible VGA port on your IBM/PC computer.
4. With the monitor switched off, connect the monitor end power plug of adaptor to the power jack adjacent to the VGA cable on the underside of the monitor.
5. Connect the power cord to the adapter and the power plug to the power source.
6. Turn on the computer.
7. Press the power switch on the monitor. The display should appear. If no display appears, check Warning Messages and Troubleshooting in this manual.
8. Ensure that your computer display is set at 1024X768 pixels and 60Hz. Press the AUTO button . The monitor optimizes the display automatically.

Note: The monitor is compliant with VESA FPMPI standards and can be wall- or arm-mounted. Before wall-mounting or arm-mounting, please disassemble the monitor stand first.

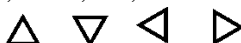
Customizing your Monitor

The On Screen Display (OSD) system provides a full range of customizable tools to optimize your display.

Important: While full customization is available, we strongly recommend using the AUTO settings, which are preset to fully optimize your monitor's performance. Simply press the AUTO button  to engage the AUTO settings. It is also recommended that you execute the AUTO function following any change made to your display from your computer.

Working with OSD Groups

1. Press any of the UP, DOWN, LEFT, or RIGHT buttons to open the OSD window.



OSD functions are divided into four Groups. Icons representing these groups appear across the top of the OSD display. From left to right, the OSD Groups are:



Display Adjust



Color Temperature



OSD Adjust

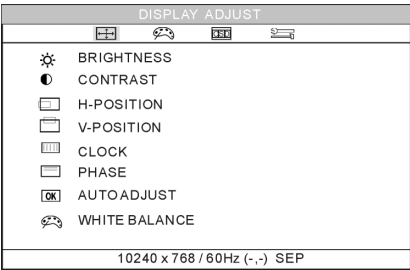


Misc Adjust (miscellaneous adjust)

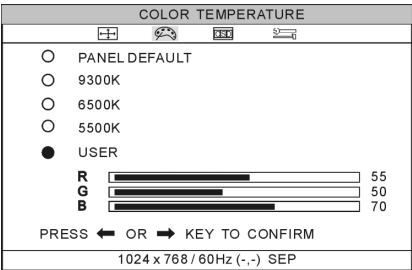
2. To select an OSD Area, with the OSD window open, press the DOWN  or UP  buttons until the desired Area's icon is highlighted and that Area's setting items are listed.
3. Press the RIGHT  or LEFT  button once to enter the setting menu area.
4. Use the DOWN  or UP  buttons to select the desired setting from the Area's displayed menu.
5. With the setting selected, use the RIGHT  or LEFT  buttons to change the settings as listed under each setting in the following section.
6. Use the DOWN  or UP  buttons to select a new menu item.
7. Push the AUTO button  once to save settings and return to the Area selection menu.
8. Push the AUTO button  again to exit the OSD.

The OSD Areas contain the following adjustment functions:

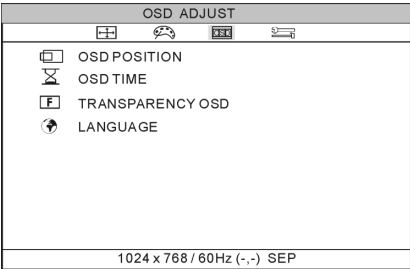
Display Adjust



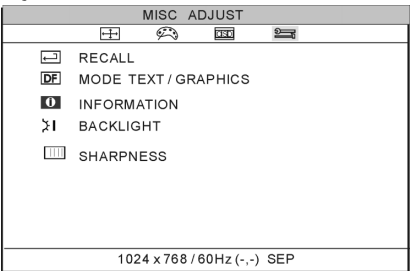
Color Temperature



OSD Adjust



Misc Adjust



Brightness & Contrast

1. To fine-tune the monitor's brightness and contrast, select the pertinent item from the menu.
2. Use the RIGHT  and LEFT  buttons to set the display as desired on the 0-100 scale that appears at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Horizontal & Vertical Position

1. To fine-tune the display's position on the monitor screen, select the pertinent item from the menu.
2. Use the RIGHT  and LEFT  buttons to set the display as desired on the 0-100 scale that appears at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Clock & Phase

1. To fine tune picture performance to compensate for drifts in the computer signal, select the pertinent item from the menu.
2. Use the RIGHT  and LEFT  buttons to set the display as desired on the 0-100 scale that appears at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Auto Adjust

1. To enable the monitor's Auto Adjust capability, select Auto Adjust from the menu.
2. Use the RIGHT  and LEFT  buttons to toggle between YES and NO as desired at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

White Balance

1. To enable the monitor's automatic White Balance capability, select White Balance from the menu.
2. Use the RIGHT  and LEFT  buttons to toggle between YES and NO as desired at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Selecting a Color Temperature setting

The following conditions are recommended for the available settings:

Setting	Use
9300K	General Use
6500K	Color Management
5500K	Photo Retouching

1. Select the desired setting from the menu.
2. Push the AUTO button  once to save settings and return to the Area selection menu.

Selecting a User-Defined Color Balance Setting

You can fine-tune the red/green/blue picture settings according to your preference or specific application

1. Select the pertinent color category from the menu.
2. Use the RIGHT  and LEFT  buttons to set the display as desired on the 0-100 scale.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

OSD Position

1. To position the OSD window to your preference, select OSD Position from the menu.
2. Use the RIGHT  and LEFT  buttons to move the display through its available positions.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

OSD Time

1. To set the duration of the OSD window's display, select OSD Time from the menu.
2. Use the RIGHT  and LEFT  buttons to set the time as desired on off, 10, 20, 30, 40, 50, 60 seconds.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Transparency OSD

1. To change the transparency of the OSD window, select Transparency OSD from the menu.
2. Use the RIGHT  and LEFT  buttons to set the display as desired on the 0-100 scale.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Selecting a Language

1. To select the language in which you wish the OSD to appear, select Language from the menu.
2. Use the RIGHT  and LEFT  buttons to toggle through the available languages shown at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Recall

1. To return the monitor's settings to the factory default, select Recall from the menu.
2. Use the RIGHT  and LEFT  buttons to toggle between YES and NO as desired at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Mode Text/Graphics

1. To choose between the monitor's automatic Sharpness optimization for Text or Graphic use, select Mode Text/Graphic from the menu.
2. Use the RIGHT  and LEFT  buttons to toggle between TEXT and GRAPHIC as desired at the bottom of the window.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Note: For better performance, please change to “Text” mode when display resolution is set at 720 x 400 and change to “Graphics” mode when display resolution is set to 640 x 250.

Information

Select Information from the menu to display 15" LCD Monitor.

Backlight

1. To set the brightness of the monitor's backlight, select Backlight from the menu.
2. Use the RIGHT  and LEFT  buttons to set the brightness as desired on the 1-100 scale.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Sharpness

1. To set the sharpness of the display, select sharpness from the menu.
2. Use the RIGHT  and LEFT  buttons to set the sharpness as desired on the Softer-Sharper scale.
3. Push the AUTO button  once to save settings and return to the Area selection menu.

Warning Messages and Troubleshooting

Warning Messages

Message	Solution
CAN NOT DISPLAY THIS INPUT SIGNAL	The input signal is not acceptable by the monitor. • Please ensure that the video resolution and frequency range are within that specified for the monitor. • Please refer to the “Technical Specifications” section of this user manual for details.
NO SIGNAL INPUT	No signal inputs are detected from either VGA-In or S-Video connector. • Check that the power switch of your computer or video source is in the “ON” position. • Check that the video signal cable is properly connected. • Ensure that no pins are bent or pushed in the video input connector.
MAIN CONTROL MENU LOCKED	• The main control menu (On-Screen Display menu) is locked to avoid unwanted adjustment. Hold RIGHT  and LEFT  buttons together for 5 seconds to unlock the main control menu.
WAIT FOR AUTOMATIC ADJUSTMENT	The monitor is detecting the input signal and automatically adjusting the monitor parameters accordingly. • It takes around 5 seconds to finish the whole process. • You are recommended to auto adjust by pressing the  button every time you change the resolution or refresh rate.

Troubleshooting

Symptom	Check Items
- No picture - LED power indicator is not lit	- Check that the monitor power switch is turned on. - Check that the power adapter is properly connected to the monitor. - Check that the power cord is properly connected to the power adapter. - Check that the power cord is properly connected to the power outlet. - Check there is electrical power coming from the power outlet. Use another device to check for power.
- No picture - The LED power indicator is orange	- Ensure the computer is not in power saving mode. (Move the mouse or press a key on the keyboard to wake up the computer.) - Check that your computer or video source power switch is in the "ON" position. - Check that the video signal cable is properly connected.
Text is not solid	- Ensure that the resolution of the video signal is 1024 by 768. - Press the  button to run automatic adjustment. - Adjust Clock and Phase in the OSD menu to fine tune. (Please refer to the "Customizing Your Monitor" section of this user manual for details.) - Adjust Sharpness in the OSD menu if you are not in 1024 by 768 resolution. (Please refer to the "Customizing Your Monitor" section of this user manual for details.)
- Screen image is not centered properly - Some lines are missing	- Press the  button to run automatic adjustment. - Adjust H. Position and V. Position to fine tune. (Please refer to the "Customizing Your Monitor" section of this user manual for details.)
There are tiny red, green, blue or black dots on the screen.	The TFT LCD panel consists of millions of small transistors. Defective transistors will each cause a missing red, green, or blue dot.

LCD Panel Display Technical Features and Specifications

Panel	Screen Size	15" (381mm) diagonal
	Pixel Format	1024 x 768 vertical strip
Input Signal	Frequency	Horizontal: 30kHz - 60kHz, Vertical: 50Hz - 75Hz
	Max. Pixel Clock	80MHz
Compatibility	PC	Max to 1024 x 768 @ 75Hz
	Mac	Max to 1024 x 768 @ 75Hz
Connector	Power	3-Pin AC Plug
Tilt	Tilt Angle	0° - 20°
Weight	Net	3.2Kg (7.1 lb)
Power	AC	100 ~ 240V, 50 ~ 60Hz
	Consumption	< 48 Watts (On), < 5 Watts (Stand-by), < 5 Watts (Off)

Regulations

FCC compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING: Any unauthorized modification to this equipment could result in the revocation of the authorization to operate the equipment and void the product warranty.



TCO'95

Congratulations!

You have just purchased a TCO'95 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during the manufacturing. Since it has not been possible for the majority of electronics equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronics equipment in offices consume an enormous amount of energy since they are often left running continuously.

What does labeling involve?

This product meets the requirements for the TCO'95 scheme that provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturskyddsforeningen (The Swedish Society for Nature Conservation) and NUTEK (The National Board for Industrial and Technical Development in Sweden).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern restrictions on the presence and use of heavy metals, brominated and chlorinated flame-retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

On the back page of this folder, you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development Unit

S-114 94 Stockholm, Sweden

Fax: +46 8 782 92 07

Email (Internet): development@tco.se

Current information regarding TCO'95 approved and labelled products may also be obtained via the Internet, using the address: <http://www.tco-info.com/>

TCO'95 is a co-operative project between TCO (The Swedish Confederation of Professional Employees), Naturskyddsforeningen (The Swedish Society for Nature Conservation) and NUTEK (The National Board for Industrial and Technical Development in Sweden).

Environmental requirements

Brominated flame retardants

Brominated flame retardants are present in printed circuit boards, cables, wires, casings and housings. In turn, they delay the spread of fire. Up to thirty percent of the plastic in a computer casing can consist of flame retardant substances. There are related to another group of environmental toxins, PCBs which are suspected to give rise to similar harm, including reproductive damage in fish eating birds and mammals, due to the bio-accumulative processes. Flame-retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

TCO'95 demand requires that plastic components weighing more than 25 grams must not contain organically bound chlorine and bromine.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. TCO'95 requirement permits the inclusion of lead since no replacement has yet been developed.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The colour-generating layers of display screens must not contain any cadmium.

Mercury1**

Mercury is sometimes found in batteries, relays and switches. Mercury damages the nervous system and is toxic in high doses. TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of mercury. It also demands that no mercury is present in any of the electrical or electronics components concerned with the display unit.

CFCs (freons)

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacturing of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with consequent increased risks of skin cancer (malignant melanoma).

The relevant TCO'95 requirement: Neither CFCs nor HCFCs may be used during the manufacturing of the product or its packaging.

**Bio-accumulative is defined as substances which accumulate within living organisms*

***Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.*



TCO'99

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Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

What does labelling involve?

This product meets the requirements for the TCO'99 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Approval requirements cover a wide range of issues: environment, ergonomics, usability, emission of electric and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental policy which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

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Environmental requirements

Flame retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

The relevant TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries, the colour-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit.

CFCs (freons)

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

**Bio-accumulative is defined as substances which accumulate within living organisms*

***Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.*